

Dell™ Studio™ 1569 Service Manual

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Notes, Cautions, and Warnings



NOTE: A NOTE indicates important information that helps you make better use of your computer.



CAUTION: A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.



WARNING: A WARNING indicates a potential for property damage, personal injury, or death.

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November 2009 Rev. A00

Model: P06F series Type: P06F001

Battery

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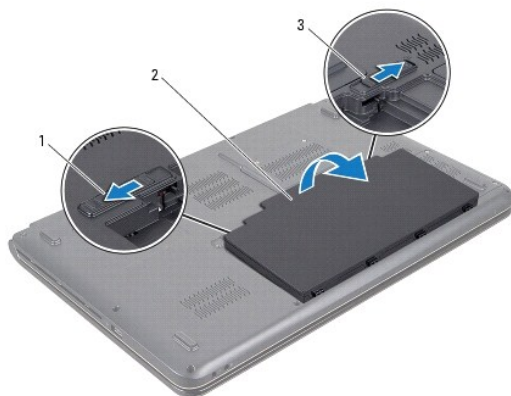
- [Removing the Battery](#)
- [Replacing the Battery](#)

Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

- ⚠ **CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.
- ⚠ **CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface.
- ⚠ **CAUTION:** To avoid damage to the computer, use only the battery designed for this particular Dell computer. Do not use batteries designed for other Dell computers.

Removing the Battery

1. Follow the procedures in [Before You Begin](#).
2. Turn the computer over on a clean, flat surface.
3. Slide the battery lock latch to the unlock position.
4. Slide the battery release latch and lift the battery up at an angle to remove it from the battery bay.



1	battery release latch	2	battery
3	battery lock latch		

Replacing the Battery

1. Follow the procedures in [Before You Begin](#).
2. Place the battery in the battery bay.
3. Push down on the battery to secure it to the computer.
4. Slide the battery lock latch to the lock position.

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Before You Begin

Dell™ Studio™ 1569 Service Manual

- [Recommended Tools](#)
- [Turning Off Your Computer](#)
- [Before Working Inside Your Computer](#)

This manual provides procedures for removing and installing components in your computer. Unless otherwise noted, each procedure assumes that the following conditions exist:

- 1 You have performed the steps in [Turning Off Your Computer](#) and [Before Working Inside Your Computer](#).
- 1 You have read the safety information that shipped with your computer.
- 1 A component can be replaced or—if purchased separately—installed by performing the removal procedure in the reverse order.


Recommended Tools

The procedures in this document may require the following tools:

- 1 small Phillips screwdriver
- 1 small flat-blade screwdriver
- 1 plastic scribe
- 1 BIOS executable update program available at support.dell.com

Turning Off Your Computer

 **CAUTION:** To avoid losing data, save and close all open files and exit all open programs before you turn off your computer.

1. Save and close all open files and exit all open programs.
2. Click **Start** , then click **Shut Down**.


The computer turns off after the operating system shutdown process finishes.


3. Ensure that the computer is turned off. If your computer did not automatically turn off when you shut down the operating system, press and hold the power button until the computer turns off.


Before Working Inside Your Computer


Use the following safety guidelines to help protect your computer from potential damage and to help to ensure your own personal safety.

Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

 **CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell is not covered by your warranty.


 **CAUTION:** Handle components and cards with care. Do not touch the components or contacts on a card. Hold a card by its edges or by its metal mounting bracket. Hold a component such as a processor by its edges, not by its pins.

 **CAUTION:** When you disconnect a cable, pull on its connector or on its pull-tab, not on the cable itself. Some cables have connectors with locking tabs; if you are disconnecting this type of cable, press in on the locking tabs before you disconnect the cable. As you pull connectors apart, keep them evenly aligned to avoid bending any connector pins. Also, before you connect a cable, ensure that both connectors are correctly oriented and aligned.


 **CAUTION:** To avoid damaging the computer, perform the following steps before you begin working inside the computer.

1. Ensure that the work surface is flat and clean to prevent the computer cover from being scratched.
2. Turn off your computer (see [Turning Off Your Computer](#)) and all attached devices.

3. If your computer is connected to a docking device, disconnect it. See the documentation that came with your docking device for instructions.

 **CAUTION:** To disconnect a network cable, first unplug the cable from your computer and then unplug the cable from the network device.

4. Disconnect all telephone or network cables from the computer.
5. Eject any cards from your computer, if applicable.
6. Disconnect your computer and all attached devices from their electrical outlets.
7. Disconnect all attached devices from your computer.

 **CAUTION:** To help prevent damage to the system board, remove the main battery (see [Removing the Battery](#)) before working inside the computer.


8. Remove the battery (see [Removing the Battery](#)).
9. Turn the computer over, open the computer, and press the power button to ground the system board.

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Flashing the BIOS

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1. Turn on the computer.
2. Go to support.dell.com.
3. Click **Drivers & Downloads**→ **Select Model**.
4. Locate the BIOS update file for your computer:


 **NOTE:** The Service Tag for your computer is located at the bottom of the computer.

If you have your computer's Service Tag:

- a. Click **Enter a Service Tag**.
- b. Enter your computer's Service Tag in the **Enter a service tag:** field, click **Go**, and proceed to [step 5](#).

If you do not have your computer's Service Tag:

- a. Select the type of product in the **Select Your Product Family** list.
- b. Select the product brand in the **Select Your Product Line** list.
- c. Select the product model number in the **Select Your Product Model** list.

 **NOTE:** If you have selected a different model and want to start over again, click **Start Over** on the top right of the menu.

- d. Click **Confirm**.
5. A list of results appear on the screen. Click **BIOS**.
 6. Click **Download Now** to download the latest BIOS file.
The **File Download** window appears.
 7. Click **Save** to save the file on your desktop. The file downloads to your desktop.
 8. Click **Close** if the **Download Complete** window appears.
The file icon appears on your desktop and is titled the same as the downloaded BIOS update file.
 9. Double-click the file icon on the desktop and follow the instructions on the screen.

Internal Card With Bluetooth® Wireless Technology

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- [Removing the Bluetooth Card](#)
- [Replacing the Bluetooth Card](#)

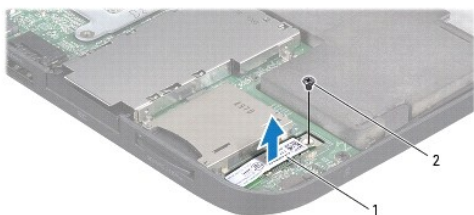
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- ⚠ **CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface.
- ⚠ **CAUTION:** To help prevent damage to the system board, remove the main battery (see [Removing the Battery](#)) before working inside the computer.

If you ordered a card with Bluetooth wireless technology with your computer, it is already installed.

Removing the Bluetooth Card

1. Follow the procedures in [Before You Begin](#).
2. Remove the battery (see [Removing the Battery](#)).
3. Remove the power button panel (see [Removing the Power Button Panel](#)).
4. Remove the keyboard (see [Removing the Keyboard](#)).
5. Remove the palm rest (see [Removing the Palm Rest](#)).
6. Remove the screw that secures the Bluetooth card to the system board.
7. Lift the Bluetooth card to disconnect it from the system board connector.



1	Bluetooth card	2	screw
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Replacing the Bluetooth Card

1. Follow the procedures in [Before You Begin](#).
2. Align the connector on the Bluetooth card with the system board connector, and press down to connect the Bluetooth card to the system board.
3. Replace the screw that secures the Bluetooth card to the system board.
4. Replace the palm rest (see [Replacing the Palm Rest](#)).
5. Replace the keyboard (see [Replacing the Keyboard](#)).
6. Replace the power button panel (see [Replacing the Power Button Panel](#)).

7. Replace the battery (see [Replacing the Battery](#)).



CAUTION: Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

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Camera Module

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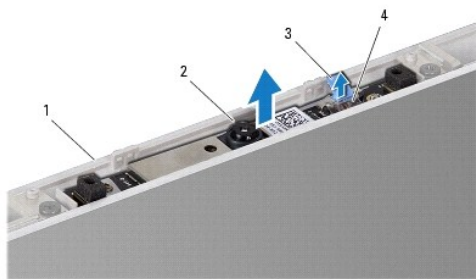
- [Removing the Camera Module](#)
- [Replacing the Camera Module](#)

Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

- ⚠ **CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.
- ⚠ **CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on the back of the computer).
- ⚠ **CAUTION:** To help prevent damage to the system board, remove the main battery (see [Removing the Battery](#)) before working inside the computer.

Removing the Camera Module

1. Follow the procedures in [Before You Begin](#).
2. Remove the battery (see [Removing the Battery](#)).
3. Remove the display assembly (see [Removing the Display Assembly](#)).
4. Remove the display bezel (see [Replacing the Display Bezel](#)).
5. Pull the pull-tab to disconnect the camera cable from the camera module.
6. Lift the camera module off the display cover.




1	display cover	2	camera module
3	pull-tab	4	camera cable

Replacing the Camera Module

1. Follow the procedures in [Before You Begin](#).
2. Remove the new camera module from its packaging and peel off the protective adhesive liner.
3. Use the alignment posts to place the camera module on the display cover.
4. Press down on the camera module to secure it to the display cover.
5. Connect the camera cable to the connector on the camera module.

6. Replace the display bezel (see [Replacing the Display Bezel](#)).
7. Replace the display assembly (see [Replacing the Display Assembly](#)).
8. Replace the battery (see [Replacing the Battery](#)).

 **CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

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Coin-Cell Battery

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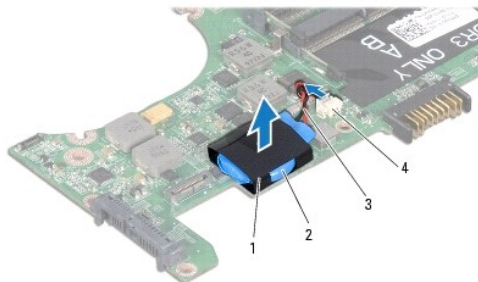
- [Removing the Coin-Cell Battery](#)
- [Replacing the Coin-Cell Battery](#)

Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

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- ⚠ **CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface.
- ⚠ **CAUTION:** To help prevent damage to the system board, remove the main battery (see [Removing the Battery](#)) before working inside the computer.

Removing the Coin-Cell Battery

1. Follow the procedures in [Before You Begin](#).
2. Remove the battery (see [Removing the Battery](#)).
3. Follow the instructions from [step 3](#) to [step 17](#) in [Removing the System Board](#).
4. Disconnect the coin-cell battery cable from the system board connector.
5. Remove the coin-cell battery from the mylar sleeve on the system board.



1	mylar sleeve	2	coin-cell battery
3	coin-cell battery cable	4	system board connector

Replacing the Coin-Cell Battery

1. Follow the procedures in [Before You Begin](#).
2. Connect the coin-cell battery cable to the system board connector.
3. Slide the coin-cell battery into the mylar sleeve on the system board.
4. Follow the instructions from [step 4](#) to [step 23](#) in [Replacing the System Board](#).
5. Replace the battery (see [Replacing the Battery](#)).

- ⚠ **CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

Processor Module

Dell™ Studio™ 1569 Service Manual

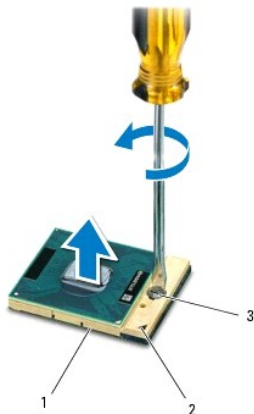
- [Removing the Processor Module](#)
- [Replacing the Processor Module](#)

Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

- ⚠ **CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.
- ⚠ **CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on your computer).
- ⚠ **CAUTION:** To prevent intermittent contact between the ZIF-socket cam screw and the processor when removing or replacing the processor, press to apply slight pressure to the center of the processor while turning the cam screw.
- ⚠ **CAUTION:** To avoid damage to the processor, hold the screwdriver so that it is perpendicular to the processor when turning the cam screw.
- ⚠ **CAUTION:** To help prevent damage to the system board, remove the main battery (see [Removing the Battery](#)) before working inside the computer.

Removing the Processor Module


1. Follow the procedures in [Before You Begin](#).
2. Remove the battery (see [Removing the Battery](#)).
3. Follow the instructions from [step 3](#) to [step 17](#) in [Removing the System Board](#).
4. Remove the processor heat sink (see [Removing the Processor Heat Sink](#)).
5. To loosen the ZIF socket, use a small, flat-blade screwdriver and rotate the ZIF-socket cam screw counterclockwise until it comes to the cam stop.




1	ZIF socket	2	Pin-1 corner
3	ZIF-socket cam screw		

- ⚠ **CAUTION:** To ensure maximum cooling for the processor, do not touch the heat transfer areas on the processor thermal-cooling assembly. The oils in your skin can reduce the heat transfer capability of the thermal pads.
 - ⚠ **CAUTION:** When removing the processor module, pull the module straight up. Be careful not to bend the pins on the processor module.
6. Lift the processor module from the ZIF socket.

Replacing the Processor Module

 **NOTE:** If a new processor is installed, you will receive a new thermal-cooling assembly, which will include an affixed thermal pad, or you will receive a new thermal pad along with documentation to illustrate proper installation.


1. Follow the procedures in [Before You Begin](#).
2. Align the pin-1 corner of the processor module with the pin-1 corner of the ZIF socket, then insert the processor module.

 **NOTE:** The pin-1 corner of the processor module has a triangle that aligns with the triangle on the pin-1 corner of the ZIF socket.

When the processor module is properly seated, all four corners are aligned at the same height. If one or more corners of the module are higher than the others, the module is not seated properly.

 **CAUTION:** To avoid damage to the processor, hold the screwdriver perpendicular to the processor when turning the cam screw.

3. Tighten the ZIF socket by turning the cam screw clockwise to secure the processor module to the system board.
4. Replace the processor heat sink (see [Replacing the Processor Heat Sink](#)).
5. Follow the instructions from [step 4](#) to [step 23](#) in [Replacing the System Board](#).
6. Replace the battery (see [Replacing the Battery](#)).

 **CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

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Processor Heat Sink

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- [Removing the Processor Heat Sink](#)
- [Replacing the Processor Heat Sink](#)

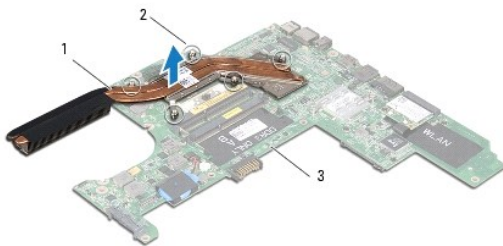
Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

If you remove the processor heat sink from the computer when the heat sink is hot, *do not touch* the metal housing of the processor heat sink.

- ⚠ **CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.
- ⚠ **CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.
- ⚠ **CAUTION:** To help prevent damage to the system board, remove the main battery (see [Removing the Battery](#)) before working inside the computer.

Removing the Processor Heat Sink

1. Follow the procedures in [Before You Begin](#).
2. Remove the battery (see [Removing the Battery](#)).
3. Follow the instructions from [step 3](#) to [step 17](#) in [Removing the System Board](#).
4. In sequential order, loosen the five captive screws on the processor heat sink.
5. Remove the processor heat sink from the system board.



1	processor heat sink	2	captive screws (5)
3	system board		

Replacing the Processor Heat Sink

- 🔧 **NOTE:** The original thermal pad can be reused if the original processor and heat sink are reinstalled together. If either the processor or heat sink is replaced, use the thermal pad provided in the kit to ensure that thermal conductivity is achieved.
- 🔧 **NOTE:** This procedure assumes that you have already removed the processor heat sink and are ready to replace it.

1. Follow the procedures in [Before You Begin](#).
2. Align the five captive screws on the processor heat sink with the screw holes on the system board.
3. In sequential order, tighten the five captive screws that secure the processor heat sink to the system board.
4. Follow the instructions from [step 4](#) to [step 23](#) in [Replacing the System Board](#).

5. Replace the battery (see [Replacing the Battery](#)).



CAUTION: Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

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Display

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- [Display Assembly](#)
- [Display Bezel](#)
- [Display Panel](#)
- [Display Hinges and Brackets](#)

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Display Assembly

Removing the Display Assembly

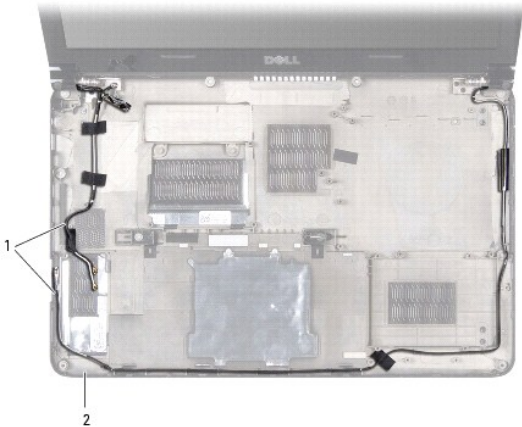
1. Follow the procedures in [Before You Begin](#).
2. Remove the battery (see [Removing the Battery](#)).
3. Follow the instructions from [step 3](#) to [step 16](#) in [Removing the System Board](#).
4. Make a note of the Mini-Card antenna cable routing and remove the antenna cables from the routing guides on the computer base. Pull the cables away so that they are clear of the computer base.
5. Remove the five screws that secure the display assembly to the computer base.
6. Remove the display cable grounding screw from the display hinge.
7. Lift the display assembly off the alignment posts on the computer base.



1	display assembly	2	screws (5)
3	Mini-Card antenna cables	4	display cable grounding screw
5	display hinges (2)		

Replacing the Display Assembly

1. Follow the procedures in [Before You Begin](#).
2. Use the alignment posts to place the display assembly on the computer base.
3. Replace the five screws that secure the display assembly to the computer base.
4. Replace the display cable grounding screw in the display hinge.
5. Route the Mini-Card antenna cables in the routing guides on the computer base.



1	Mini-Card antenna cables	2	computer base
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6. Follow the instructions from [step 4](#) to [step 23](#) in [Replacing the System Board](#).
7. Replace the battery (see [Replacing the Battery](#)).

CAUTION: Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

Display Bezel

Removing the Display Bezel

CAUTION: The display bezel is extremely fragile. Be careful when removing it to prevent damaging the bezel.

1. Follow the procedures in [Before You Begin](#).
2. Remove the display assembly (see [Removing the Display Assembly](#)).
3. Remove the four rubber pads that cover the display bezel screws.
4. Remove the four screws that secure the display bezel to the display assembly.
5. Carefully pull up along the edges of the display bezel to remove it from the display assembly.



1	screws (4)	2	rubber pads (4)
3	display bezel		

Replacing the Display Bezel

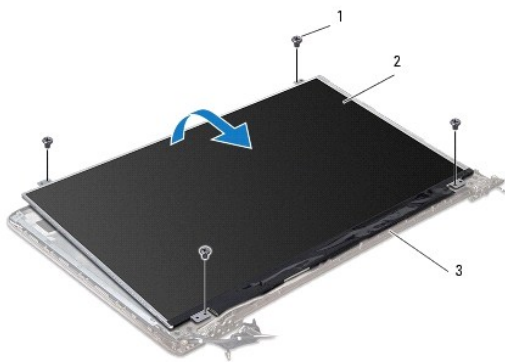
1. Follow the procedures in [Before You Begin](#).
2. Ensure the display and Mini-Card cables route through the hinge portion of the display bezel, and snap the display bezel onto the display assembly.
3. Replace the four screws that secure the display bezel to the display assembly.
4. Replace the four rubber pads that cover the display bezel screws.
5. Replace the display assembly (see [Replacing the Display Assembly](#)).
6. Replace the battery (see [Replacing the Battery](#)).

CAUTION: Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

Display Panel

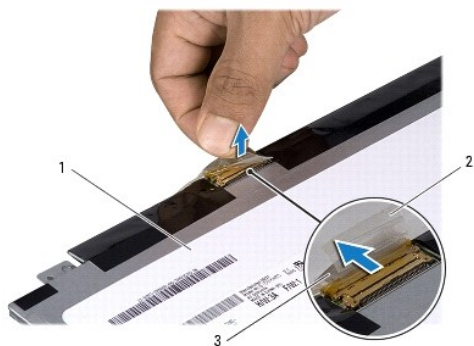
Removing the Display Panel

1. Follow the procedures in [Before You Begin](#).
2. Remove the display assembly (see [Removing the Display Assembly](#)).
3. Remove the display bezel (see [Removing the Display Bezel](#)).
4. Remove the four screws that secure the display panel to the display cover.
5. Lift the display panel and turn it over onto a clean surface.



1	screws (4)	2	display panel
3	display cover		

6. Pull the pull-tab to disconnect the display cable from the display panel.



1	display panel	2	pull-tab
3	display cable		

Replacing the Display Panel

1. Follow the procedures in [Before You Begin](#).
2. Connect the display cable to the connector on the back of the display panel.
3. Use the alignment posts to place the display panel on the display cover.
4. Replace the four screws that secure the display panel to the display cover.
5. Replace the display bezel (see [Replacing the Display Bezel](#)).
6. Replace the display assembly (see [Replacing the Display Assembly](#)).
7. Replace the battery (see [Replacing the Battery](#)).

CAUTION: Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

Display Hinges and Brackets

Removing the Display Hinges and Brackets

1. Follow the procedures in [Before You Begin](#).
2. Remove the display assembly (see [Removing the Display Assembly](#)).
3. Remove the display bezel (see [Removing the Display Bezel](#)).
4. Remove the display panel (see [Removing the Display Panel](#)).
5. Remove the four screws that secure the display hinges and brackets to the display cover.



1	display cover	2	screws (4)
3	display hinges and brackets (2)		

Replacing the Display Hinges and Brackets

1. Follow the procedures in [Before You Begin](#).
2. Replace the four screws that secure the display hinges and brackets to the display cover.
3. Replace the display panel (see [Replacing the Display Panel](#)).
4. Replace the display bezel (see [Replacing the Display Bezel](#)).
5. Replace the display assembly (see [Replacing the Display Assembly](#)).
6. Replace the battery (see [Replacing the Battery](#)).

CAUTION: Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

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Processor Fan

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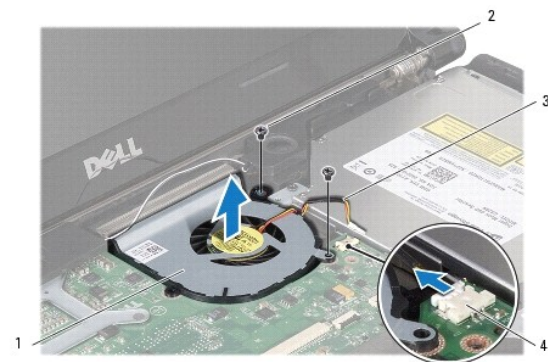
- [Removing the Processor Fan](#)
- [Replacing the Processor Fan](#)

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- ⚠ **CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface.
- ⚠ **CAUTION:** To help prevent damage to the system board, remove the main battery (see [Removing the Battery](#)) before working inside the computer.

Removing the Processor Fan

1. Follow the procedures in [Before You Begin](#).
2. Remove the battery (see [Removing the Battery](#)).
3. Remove the power button panel (see [Removing the Power Button Panel](#)).
4. Remove the keyboard (see [Removing the Keyboard](#)).
5. Remove the palm rest (see [Removing the Palm Rest](#)).
6. Disconnect the processor fan cable from the system board connector.
7. Remove the two screws that secure the processor fan to the computer base.
8. Lift the processor fan out of the computer base.




1	processor fan	2	screws (2)
3	processor fan cable	4	system board connector

Replacing the Processor Fan

1. Follow the procedures in [Before You Begin](#).
2. Place the processor fan in the computer base.

3. Replace the two screws that secure the processor fan to the computer base.
4. Connect the processor fan cable to the system board connector.
5. Replace the palm rest (see [Replacing the Palm Rest](#)).
6. Replace the keyboard (see [Replacing the Keyboard](#)).
7. Replace the power button panel (see [Replacing the Power Button Panel](#)).
8. Replace the battery (see [Replacing the Battery](#)).

 **CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

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Hard Drive

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- [Removing the Hard Drive](#)
- [Replacing the Hard Drive](#)

Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

If you remove the hard drive from the computer when the drive is hot, *do not touch* the metal housing of the hard drive.

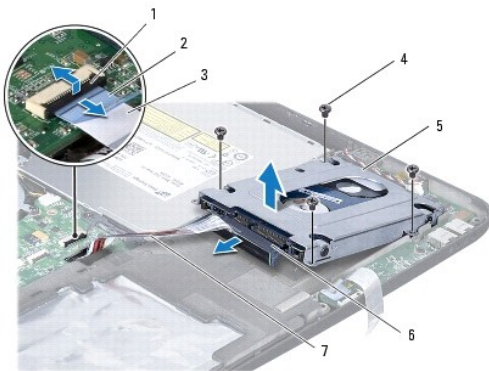
- ⚠ **CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell is not covered by your warranty.
 - ⚠ **CAUTION:** To prevent data loss, turn off your computer (see [Turning Off Your Computer](#)) before removing the hard drive. Do not remove the hard drive while the computer is On or in Sleep state.
 - ⚠ **CAUTION:** To help prevent damage to the system board, remove the main battery (see [Removing the Battery](#)) before working inside the computer.
 - ⚠ **CAUTION:** Hard drives are extremely fragile. Exercise care when handling the hard drive.
 - 🔧 **NOTE:** Dell does not guarantee compatibility or provide support for hard drives from sources other than Dell.
 - 🔧 **NOTE:** If you are installing a hard drive from a source other than Dell, you need to install an operating system, drivers, and utilities on the new hard drive (see the *Dell Technology Guide*).
-

Removing the Hard Drive

1. Follow the procedures in [Before You Begin](#).
2. Remove the battery (see [Removing the Battery](#)).
3. Remove the power button panel (see [Removing the Power Button Panel](#)).
4. Remove the keyboard (see [Removing the Keyboard](#)).
5. Remove the palm rest (see [Removing the Palm Rest](#)).
6. Lift the connector latch, then pull the pull-tab and disconnect the audio cable from the system board connector.
7. Remove the four screws that secure the hard drive assembly to the computer base.

- ⚠ **CAUTION:** When the hard drive is not in the computer, store it in protective antistatic packaging (see "Protecting Against Electrostatic Discharge" in the safety instructions that shipped with your computer).

8. Lift the hard drive assembly out of the computer base.
9. Pull the interposer to disconnect the hard drive cable from the hard drive.



1	connector latch	2	pull-tab
3	audio cable	4	screws (4)
5	hard drive assembly	6	interposer
7	hard drive cable		

10. Remove the four screws that secure the hard drive bracket to the hard drive.

11. Remove the hard drive from the hard drive bracket.



1	hard drive	2	hard drive bracket
3	screws (4)		

Replacing the Hard Drive

- Follow the procedures in [Before You Begin](#).
- Remove the new hard drive from its packaging.
Save the original packaging for storing or shipping the hard drive.
- Replace the four screws that secure the hard drive bracket to the hard drive.
- Connect the interposer to the hard drive assembly.
- Place the hard drive assembly in the computer base.
- Replace the four screws that secure the hard drive assembly to the computer base.
- Slide the audio cable into the system board connector and press down on the connector latch to secure the cable.
- Replace the palm rest (see [Replacing the Palm Rest](#)).
- Replace the keyboard (see [Replacing the Keyboard](#)).
- Replace the power button panel (see [Replacing the Power Button Panel](#)).
- Replace the battery (see [Replacing the Battery](#)).

CAUTION: Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

- Install the operating system for your computer, as needed. See "Restoring Your Operating System" in the *Setup Guide*.
- Install the drivers and utilities for your computer, as needed. For more information, see the *Dell Technology Guide*.

Keyboard

Dell™ Studio™ 1569 Service Manual

- [Removing the Keyboard](#)
- [Replacing the Keyboard](#)

Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

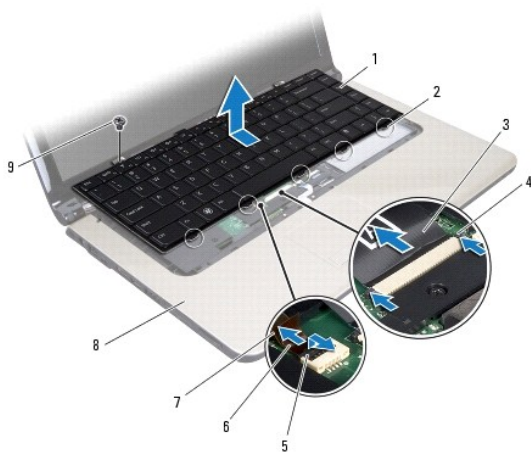
- ⚠ **CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.
- ⚠ **CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface.
- ⚠ **CAUTION:** To help prevent damage to the system board, remove the main battery (see [Removing the Battery](#)) before working inside the computer.

Removing the Keyboard

1. Follow the procedures in [Before You Begin](#).
2. Remove the battery (see [Removing the Battery](#)).
3. Remove the power button panel (see [Removing the Power Button Panel](#)).
4. Remove the screw that secures the keyboard to the computer base.

- ⚠ **CAUTION:** The keycaps on the keyboard are fragile, easily dislodged, and time-consuming to replace. Be careful when removing and handling the keyboard.
- ⚠ **CAUTION:** Be extremely careful when removing and handling the keyboard. Failure to do so could result in scratching the display panel.

5. Ease the keyboard up until the keyboard cable(s) are visible.
 - a. Push the connector tabs up and disconnect the keyboard cable from the system board connector.
 - b. If you have a backlit keyboard, lift the connector latch, then pull the pull-tab and disconnect the keyboard backlight cable from the system board connector.
6. Lift the keyboard off the palm rest.




1	keyboard	2	tabs on the keyboard (5)
3	keyboard cable	4	connector tabs (2)
5	connector latch	6	pull-tab

7	keyboard backlight cable	8	palm rest
9	screw		

Replacing the Keyboard

1. Follow the procedures in [Before You Begin](#).
2. Place the keyboard upside down on the palm rest and connect the keyboard cables.
 - a. Slide the keyboard cable into the system board connector and press the connector tabs into the connector to secure the cable.
 - b. If you have a backlit keyboard, slide the keyboard backlight cable into the system board connector and press down on the connector latch to secure the cable.
3. Align the tabs on the keyboard with the slots on the palm rest and lower the keyboard into place.
4. Replace the screw that secures the keyboard to the computer base.
5. Replace the power button panel (see [Replacing the Power Button Panel](#)).
6. Replace the battery (see [Replacing the Battery](#)).

 **CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

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Memory Module(s)

Dell™ Studio™ 1569 Service Manual

- [Removing the Memory Module\(s\)](#)
- [Replacing the Memory Module\(s\)](#)

Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

- ⚠ **CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.
- ⚠ **CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as a connector on the back of the computer).
- ⚠ **CAUTION:** To help prevent damage to the system board, remove the main battery (see [Removing the Battery](#)) before working inside the computer.

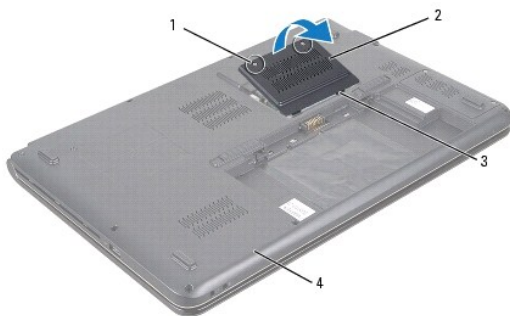
You can increase your computer memory by installing memory modules on the system board. See "Basic Specifications" in your *Setup Guide* and *Comprehensive Specifications* at support.dell.com/manuals for information on the memory supported by your computer.

🔧 **NOTE:** Memory modules purchased from Dell™ are covered under your computer warranty.

Your computer has two user-accessible SODIMM sockets that you can access from the bottom of the computer.

Removing the Memory Module(s)

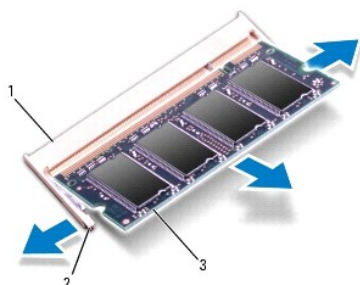
1. Follow the procedures in [Before You Begin](#).
2. Remove the battery (see [Removing the Battery](#)).
3. Loosen the two captive screws that secure the memory module cover to the computer base.
4. Lift the memory module cover at an angle and ease the tabs out of the computer base.



1	captive screws (2)	2	memory module cover
3	tabs (2)	4	computer base

⚠ **CAUTION:** To prevent damage to the memory module connector, do not use tools to spread the memory module securing clips.

5. Use your fingertips to carefully spread apart the securing clips on each end of the memory module connector until the module pops up.
6. Remove the memory module from the memory module connector.



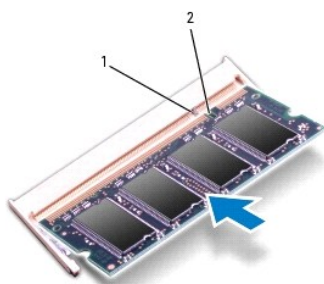
1	memory module connector	2	securing clips (2)
3	memory module		

Replacing the Memory Module(s)

CAUTION: If you need to install memory modules in two connectors, install a memory module in the connector labeled "DIMM A" before you install a memory module in the connector labeled "DIMM B."

1. Follow the procedures in [Before You Begin](#).
2. Align the notch in the memory module with the tab in the memory module connector.
3. Slide the memory module firmly into the slot at a 45-degree angle, and press the memory module down until it clicks into place. If you do not hear the click, remove the memory module and reinstall it.

NOTE: If the memory module is not installed properly, the computer may not boot.



1	tab	2	notch
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4. Replace the memory module cover and tighten the two captive screws that secure the memory module cover to the computer base.
5. Replace the battery (see [Replacing the Battery](#)). Connect the AC adapter to your computer and an electrical outlet.
6. Turn on the computer.

As the computer boots, it detects the memory module and automatically updates the system configuration information.

To confirm the amount of memory installed in the computer, click

Start →  → **Help and Support** → **Dell System Information**.

CAUTION: Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

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Wireless Mini-Card(s)

Dell™ Studio™ 1569 Service Manual

- [Removing the Mini-Card\(s\)](#)
- [Replacing the Mini-Card\(s\)](#)

Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

⚠ **CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.

⚠ **CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface.

⚠ **CAUTION:** To help prevent damage to the system board, remove the main battery (see [Removing the Battery](#)) before working inside the computer.

⚠ **CAUTION:** When the Mini-Card is not in the computer, store it in protective antistatic packaging (see "Protecting Against Electrostatic Discharge" in the safety instructions that shipped with your computer).

🔧 **NOTE:** Dell does not guarantee compatibility or provide support for Mini-Cards from sources other than Dell.

🔧 **NOTE:** Depending on the configuration of the computer when it was sold, the Mini-Card slot may or may not have a Mini-Card installed in the slot.

If you ordered a wireless Mini-Card with your computer, the card is already installed.

Your computer supports two Mini-Card slots:

- 1 One full Mini-Card slot – Wireless Wide Area Network (WWAN)
- 1 One half Mini-Card slot – Wireless Local Area Network (WLAN)

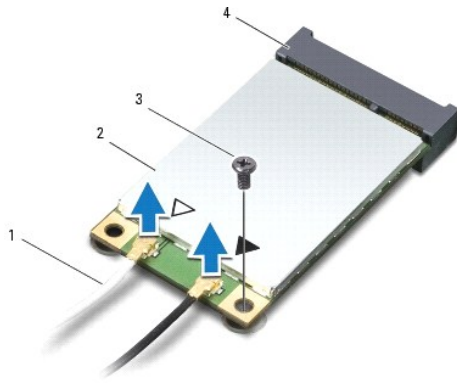
Removing the Mini-Card(s)

1. Follow the procedures in [Before You Begin](#).
2. Remove the battery (see [Removing the Battery](#)).
3. Loosen the two captive screws that secure the Mini-Card cover to the computer base.
4. Lift the Mini-Card cover at an angle and ease the tabs out of the computer base.



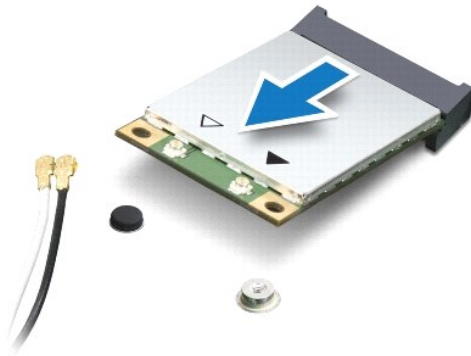
1	Mini-Card cover	2	captive screws (2)
3	tabs (2)	4	computer base

5. Disconnect the antenna cables from the Mini-Card.
6. Remove the screw that secures the Mini-Card to the system board.



1	antenna cables (2)	2	Mini-Card
3	screw	4	system board connector

- Lift the Mini-Card out of the system board connector.



Replacing the Mini-Card(s)

- Follow the procedures in [Before You Begin](#).
- Remove the new Mini-Card from its packaging.

CAUTION: Use firm and even pressure to slide the card into place. If you use excessive force, you may damage the connector.

CAUTION: The connectors are keyed to ensure correct insertion. If you feel resistance, check the connectors on the card and on the system board, and realign the card.

CAUTION: To avoid damage to the Mini-Card, never place cables under the card.

- With the label on the Mini-Card facing up, insert it at a 45-degree angle into the appropriate system board connector.
- Press the other end of the Mini-Card down into the slot on the system board and replace the screw that secures the Mini-Card to the system board.
- Connect the appropriate antenna cables to the Mini-Card. The following table provides the antenna cable color scheme for the Mini-Card(s) supported by your computer.

Connectors on the Mini-Card	Colors of Antenna Cables
main WLAN (white triangle)	white
auxiliary WLAN (black triangle)	black
main WWAN (white triangle)	white with gray stripe
auxiliary WWAN (black triangle)	black with gray stripe

6. Secure unused antenna cables in the protective mylar sleeve.
7. Replace the Mini-Card cover and tighten the two captive screws that secure the Mini-Card cover to the computer base.
8. Replace the battery (see [Replacing the Battery](#)).



CAUTION: Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

9. Install the drivers and utilities for your computer, as required. For more information, see the *Dell Technology Guide*.



NOTE: If you are installing a communication card from a source other than Dell, you must install the appropriate drivers and utilities. For more generic driver information, see the *Dell Technology Guide*.

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Optical Drive

Dell™ Studio™ 1569 Service Manual

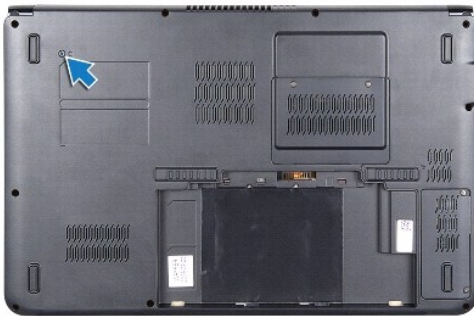
- [Removing the Optical Drive](#)
- [Replacing the Optical Drive](#)

Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

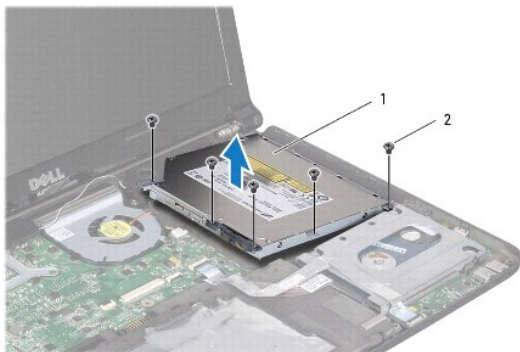
- ⚠ **CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.
 - ⚠ **CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface (such as the back panel) on the computer.
 - ⚠ **CAUTION:** To help prevent damage to the system board, remove the main battery (see [Removing the Battery](#)) before working inside the computer.
-

Removing the Optical Drive

1. Follow the procedures in [Before You Begin](#).
2. Remove the battery (see [Removing the Battery](#)).
3. Remove the screw that secures the optical drive assembly to the computer base.

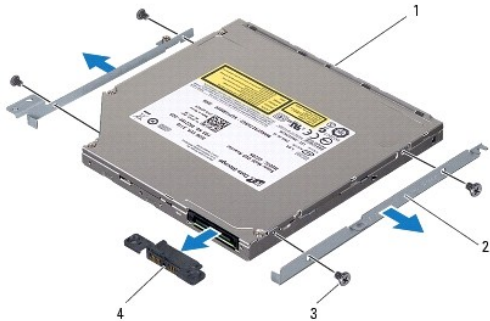


4. Remove the power button panel (see [Removing the Power Button Panel](#)).
5. Remove the keyboard (see [Removing the Keyboard](#)).
6. Remove the palm rest (see [Removing the Palm Rest](#)).
7. Remove the five screws that secure the optical drive to the computer base.



1	optical drive assembly	2	screws (5)
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8. Disconnect the optical drive interposer from the optical drive.
9. Remove the four screws (two on each side) that secure the optical drive brackets to the optical drive.



1	optical drive	2	brackets (2)
3	screws (4)	4	optical drive interposer

Replacing the Optical Drive

1. Follow the procedures in [Before You Begin](#).
2. Replace the four screws (two on each side) that secure the optical drive brackets to the optical drive.
3. Connect the optical drive interposer to the optical drive.
4. Place the optical drive assembly in the computer base.
5. Replace the five screws that secure the optical drive to the computer base.
6. Replace the palm rest (see [Replacing the Palm Rest](#)).
7. Replace the keyboard (see [Replacing the Keyboard](#)).
8. Replace the power button panel (see [Replacing the Power Button Panel](#)).
9. Turn the computer over and replace the screw that secures the optical drive assembly to the computer base.
10. Replace the battery (see [Replacing the Battery](#)).

CAUTION: Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

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Palm Rest

Dell™ Studio™ 1569 Service Manual

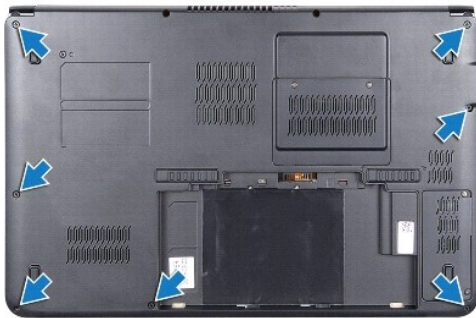
- [Removing the Palm Rest](#)
- [Replacing the Palm Rest](#)

Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

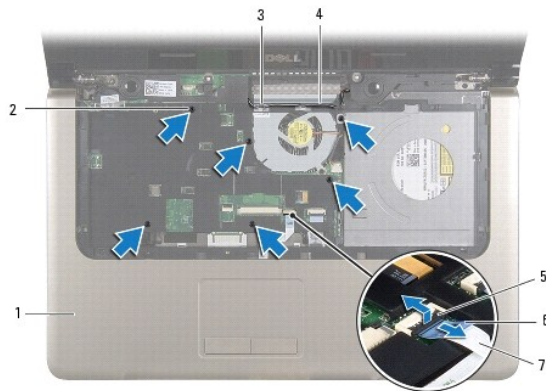
- ⚠ **CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface.
 - ⚠ **CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.
 - ⚠ **CAUTION:** To help prevent damage to the system board, remove the main battery (see [Removing the Battery](#)) before working inside the computer.
-

Removing the Palm Rest

1. Follow the procedures in [Before You Begin](#).
2. Remove the battery (see [Removing the Battery](#)).
3. Remove the power button panel (see [Removing the Power Button Panel](#)).
4. Remove the keyboard (see [Removing the Keyboard](#)).
5. Close the computer and turn it over.
6. Remove the seven screws that secure the palm rest to the computer base.



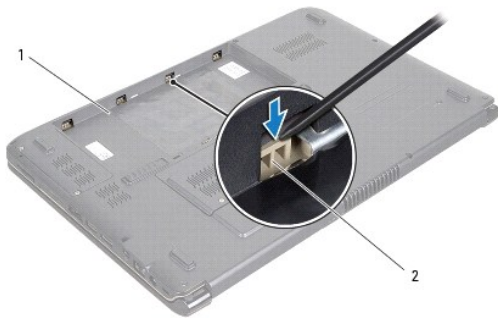
7. Turn the computer over and open the display as far as possible.
8. Lift the connector latch, then pull the pull-tab and disconnect the touch pad cable from the system board connector.
9. Remove the six screws that secure the palm rest to the computer base.
10. Make a note of the speaker cable routing and carefully dislodge the cable from the routing guides on the palm rest.



1	palm rest	2	screws (6)
3	routing guides	4	speaker cable
5	latch connector	6	pull-tab
7	touch pad cable		

CAUTION: Carefully separate the palm rest from the computer base to avoid damage to the palm rest.

11. Turn the computer over.
12. In the battery bay, use a plastic scribe to disengage the tabs on the palm rest.




1	battery bay	2	tabs (4)
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13. Turn the computer over and open the display as far as possible.
14. Continue to disengage the tabs on the palm rest and remove it from the computer base.



Replacing the Palm Rest

1. Follow the procedures in [Before You Begin](#).
2. Align the palm rest on the computer base and snap the palm rest into place.
3. Slide the touch pad cable into the system board connector and press down on the connector latch to secure the cable.
4. Replace the six screws that secure the palm rest to the computer base.
5. Replace the keyboard (see [Replacing the Keyboard](#)).
6. Replace the power button panel (see [Replacing the Power Button Panel](#)).
7. Close the computer and turn it over.
8. Replace the seven screws that secure the palm rest to the computer base.
9. Replace the battery (see [Replacing the Battery](#)).

 **CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

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Power Button Panel

Dell™ Studio™ 1569 Service Manual

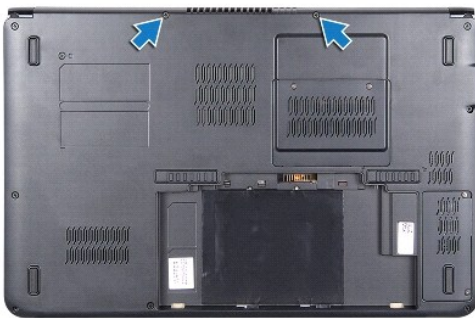
- [Removing the Power Button Panel](#)
- [Replacing the Power Button Panel](#)

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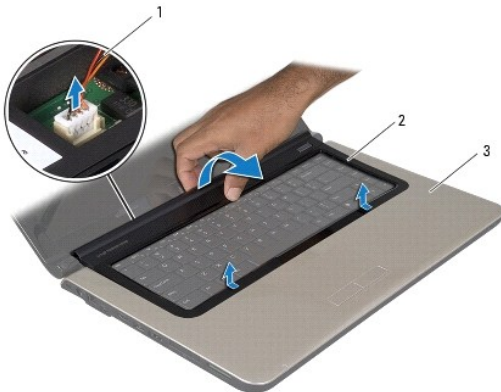
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- ⚠ **CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface.
- ⚠ **CAUTION:** To help prevent damage to the system board, remove the main battery (see [Removing the Battery](#)) before working inside the computer.

Removing the Power Button Panel

1. Follow the procedures in [Before You Begin](#).
2. Remove the battery (see [Removing the Battery](#)).
3. Remove the two screws that secure the power button panel to the computer base.



4. Turn the computer over and open the display as far as possible.
5. Between the two hinges, pull up on the power button panel and lift it up at an angle to disengage it from the back of the computer.
6. Disconnect the power button cable from the system board connector.
7. Continue to pull up on the power button panel and remove it from the palm rest.



1	power button cable	2	power button panel
3	palm rest		

Replacing the Power Button Panel

1. Follow the procedures in [Before You Begin](#).
2. Connect the power button cable to the system board connector.
3. Slide the tabs on the power button panel into the slots on the palm rest and snap the power button panel into place.
4. Close the computer and turn it over.
5. Replace the two screws that secure the power button panel to the computer base.
6. Replace the battery (see [Replacing the Battery](#)).

 **CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

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Speakers

Dell™ Studio™ 1569 Service Manual

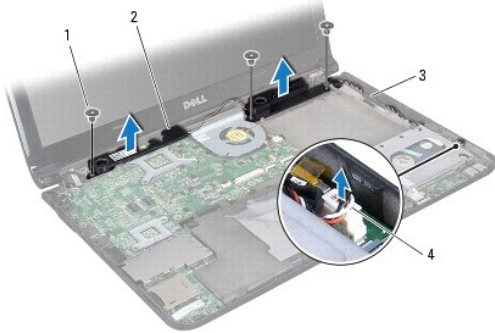
- [Removing the Speakers](#)
- [Replacing the Speakers](#)

Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

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- ⚠ **CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface.
- ⚠ **CAUTION:** To help prevent damage to the system board, remove the main battery (see [Removing the Battery](#)) before working inside the computer.

Removing the Speakers

1. Follow the procedures in [Before You Begin](#).
2. Remove the battery (see [Removing the Battery](#)).
3. Remove the power button panel (see [Removing the Power Button Panel](#)).
4. Remove the keyboard (see [Removing the Keyboard](#)).
5. Remove the palm rest (see [Removing the Palm Rest](#)).
6. Remove the optical drive (see [Removing the Optical Drive](#)).
7. Remove one screw from the left speaker and two screws from the right speaker.
8. Disconnect the speaker cable from the USB/audio board connector.
9. Make a note of the speaker cable routing and remove the speakers from the computer base.



1	screws (3)	2	speakers (2)
3	speaker cable routing guides	4	speaker cable

Replacing the Speakers

1. Follow the procedures in [Before You Begin](#).
2. Place the speakers in the computer base.

3. Route the speaker cable and connect it to the USB/audio board connector.
4. Replace one screw on the left speaker and two screws on the right speaker.
5. Replace the optical drive (see [Replacing the Optical Drive](#)).
6. Replace the palm rest (see [Replacing the Palm Rest](#)).
7. Replace the keyboard (see [Replacing the Keyboard](#)).
8. Replace the power button panel (see [Replacing the Power Button Panel](#)).
9. Replace the battery (see [Replacing the Battery](#)).



CAUTION: Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

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System Board

Dell™ Studio™ 1569 Service Manual

- [Removing the System Board](#)
- [Replacing the System Board](#)
- [Entering the Service Tag in the BIOS](#)

Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

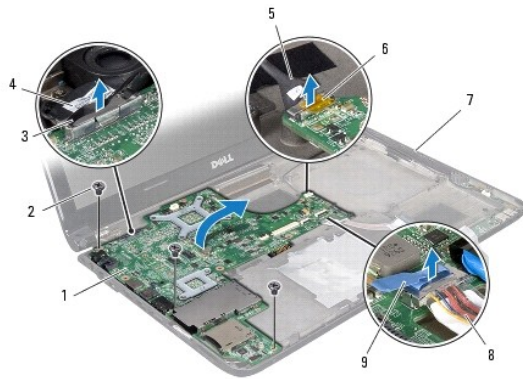
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⚠ **CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface.

⚠ **CAUTION:** To help prevent damage to the system board, remove the main battery (see [Removing the Battery](#)) before working inside the computer.

Removing the System Board

1. Follow the procedures in [Before You Begin](#).
2. Remove the battery (see [Removing the Battery](#)).
3. Remove the memory module(s) (see [Removing the Memory Module\(s\)](#)).
4. Remove the Mini-Card(s) (see [Removing the Mini-Card\(s\)](#)).
5. Remove the power button panel (see [Removing the Power Button Panel](#)).
6. Remove the keyboard (see [Removing the Keyboard](#)).
7. Remove the palm rest (see [Removing the Palm Rest](#)).
8. Remove the Bluetooth® card (see [Removing the Bluetooth Card](#)).
9. Remove the hard drive (see [Removing the Hard Drive](#)).
10. Remove the optical drive (see [Removing the Optical Drive](#)).
11. Remove the processor fan (see [Removing the Processor Fan](#)).
12. Remove the speakers (see [Removing the Speakers](#)).
13. Pull the pull-tab to disconnect the display cable from the system board connector.
14. Remove the three screws that secure the system board to the computer base.
15. Lift the system board assembly up at an angle, and pull the pull-tabs to disconnect the hard drive cable and the USB cable from underneath the system board.




1	system board assembly	2	screws (3)
3	pull-tab	4	display cable
5	USB cable	6	pull-tab
7	computer base	8	hard drive cable
9	pull-tab		

16. Carefully ease the connectors on the system board out of the computer base and lift the system board assembly out of the computer base.
17. Turn the system board assembly over.
18. Follow the instructions from [step 4](#) to [step 5](#) in [Removing the Coin-Cell Battery](#).
19. Remove the processor heat sink (see [Removing the Processor Heat Sink](#)).
20. Remove the processor module (see [Removing the Processor Module](#)).

Replacing the System Board

1. Follow the procedures in [Before You Begin](#).
2. Replace the processor module (see [Replacing the Processor Module](#)).
3. Replace the processor heat sink (see [Replacing the Processor Heat Sink](#)).
4. Ensure that the Mini-Card antenna cables are attached to the computer base.
5. Follow the instructions from [step 2](#) to [step 3](#) in [Replacing the Coin-Cell Battery](#).
6. Connect the hard drive cable and the USB cable to the system board connectors.
7. Turn the system board assembly over and align the connectors on the system board with the slots in the computer base.
8. Connect the display cable to the system board connector.
9. Connect the audio cable to the system board connector.
10. Replace the three screws that secure the system board to the computer base.
11. Replace the speakers (see [Replacing the Speakers](#)) and route the USB cable in the routing guides on the right speaker.
12. Replace the processor fan (see [Replacing the Processor Fan](#)).
13. Replace the optical drive (see [Replacing the Optical Drive](#)).
14. Replace the hard drive (see [Replacing the Hard Drive](#)).

15. Replace the Bluetooth card (see [Replacing the Bluetooth Card](#)).
16. Replace the palm rest (see [Replacing the Palm Rest](#)).
17. Replace the power button panel (see [Replacing the Power Button Panel](#)).
18. Replace the keyboard (see [Replacing the Keyboard](#)).
19. Replace the Mini-Card(s) (see [Replacing the Mini-Card\(s\)](#)).
20. Replace the memory module(s) (see [Replacing the Memory Module\(s\)](#)).
21. Replace the battery (see [Replacing the Battery](#)).

 **CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

22. Turn on the computer.

 **NOTE:** After you have replaced the system board, enter the computer's Service Tag into the BIOS of the replacement system board.




23. Enter the service tag (see [Entering the Service Tag in the BIOS](#)).

Entering the Service Tag in the BIOS

1. Ensure that the AC adapter is plugged in and that the main battery is installed properly.
2. Turn on the computer.
3. Press <F2> during POST to enter the system setup program.
4. Navigate to the security tab and enter the service tag in the **Set Service Tag** field.

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-  **NOTE:** A NOTE indicates important information that helps you make better use of your computer.
-  **CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.
-  **WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.

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USB/Audio Board

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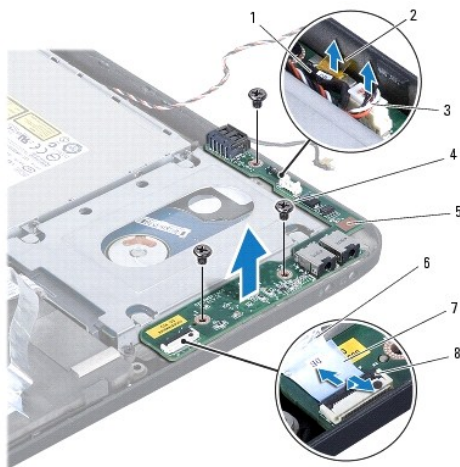
- [Removing the USB/Audio Board](#)
- [Replacing the USB/Audio Board](#)

Before working inside your computer, read the safety information that shipped with your computer. For additional safety best practices information, see the Regulatory Compliance Homepage at www.dell.com/regulatory_compliance.

- ⚠ **CAUTION:** Only a certified service technician should perform repairs on your computer. Damage due to servicing that is not authorized by Dell™ is not covered by your warranty.
- ⚠ **CAUTION:** To avoid electrostatic discharge, ground yourself by using a wrist grounding strap or by periodically touching an unpainted metal surface.
- ⚠ **CAUTION:** To help prevent damage to the system board, remove the main battery (see [Removing the Battery](#)) before working inside the computer.

Removing the USB/Audio Board


1. Follow the procedures in [Before You Begin](#).
2. Remove the battery (see [Removing the Battery](#)).
3. Remove the power button panel (see [Removing the Power Button Panel](#)).
4. Remove the keyboard (see [Removing the Keyboard](#)).
5. Remove the palm rest (see [Removing the Palm Rest](#)).
6. Disconnect the speaker cable from the USB/audio board connector.
7. Pull the pull-tab to disconnect the USB cable from the USB/audio board connector.
8. Lift the connector latch, then pull the pull-tab and disconnect the audio cable from the USB/audio board connector.
9. Remove the three screws that secure the USB/audio board to the computer base.
10. Lift the USB/audio board out of the computer base.



1	USB cable	2	pull-tab
3	speaker cable	4	screws (3)
5	USB/audio board	6	audio cable
7	pull-tab	8	latch connector

Replacing the USB/Audio Board

1. Follow the procedures in [Before You Begin](#).
2. Place the USB/audio board on the computer base.
3. Replace the three screws that secure the USB/audio board to the computer base.
4. Slide the audio cable into the USB/audio board connector and press down on the connector latch to secure the cable.
5. Connect the speaker cable to the USB/audio board connector.
6. Connect the USB cable to the USB/audio board connector.
7. Replace the palm rest (see [Replacing the Palm Rest](#)).
8. Replace the keyboard (see [Replacing the Keyboard](#)).
9. Replace the power button panel (see [Replacing the Power Button Panel](#)).
10. Replace the battery (see [Replacing the Battery](#)).

 **CAUTION:** Before turning on the computer, replace all screws and ensure that no stray screws remain inside the computer. Failure to do so may result in damage to the computer.

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